Elective Geog code: 2125 (paper 2)



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2023 Semester 1 &2 Plan for Secondary Three Normal (Academic) Elective Geography

1 Topics covered for Semester 1&2*:

| Weeks | Topics/ Learning Outcomes Pupils will be able to describe and explain the factors in the topics and also perform the skills as follows: | Coursebook pg | Assignments . WA. Exams | Date. Marks attained |
|-------------------------------|--|--|----------------------------|----------------------------|
| Term 1/1 *New year (Mon-Tues) | Settling In and classroom routines Topic 1: Thinking Geographically KQ1 What is the relationship between people and nature in their neighbourhoods? | Geography in Everyday Life | | |
| | Relationship between people and nature local communities and nearby nature areas are dependent upon each other local communities and nearby nature areas mutually affect each other Benefits enjoyed by people and nature nature areas lower temperatures, remove pollutants and provide space for recreation community activities promote the importance of environmental protection | P2-6 | WS 1 | |
| | 3. Disadvantages to people and nature a) wildlife from nearby nature areas may harm people and environmental protection limits development b) visitors to nature cause soil erosion, damage vegetation, worsen pollution and disturb wildlife | | | |
| Term 1/2 | Topic 1: Thinking Geographically KQ1 What is the relationship between people and nature in their neighbourhoods? 1. Relationship between people and nature a) local communities and nearby nature areas are dependent upon each other b) local communities and nearby nature areas mutually affect each other 2. Benefits enjoyed by people and nature a) nature areas lower temperatures, remove pollutants and provide space for recreation b) community activities promote the importance of environmental protection 3. Disadvantages to people and nature | Geography in Everyday Life P2-6 | WS 1 | |
| | a) wildlife from nearby nature areas may harm | | | |

| | people and environmental protection limits development b) visitors to nature cause soil erosion, damage vegetation, worsen pollution and disturb wildlife | | | |
|---------------------------------|--|---|------|--|
| Term 1/3 *CNY (Fri celebration) | Topic 1: Thinking Geographically KQ2: How do people acquire a sense of place in their neighbourhoods? 1. Sense of place a) people associate importance, meanings and memories with specific locations in their neighbourhoods b) people's experiences with natural and built environments, and interaction with others at these locations 2. Acquiring a sense of place a) individuals repeatedly encounter people and objects along familiar paths or roads during regular travel b) individuals experience significant or memorable events at local landmarks and gathering places 3. Representing a sense of place a) individuals and organisations use different forms and types of media to express people's sense of place b) individuals' sense of place could be enhanced or contradicted by these different representations | Geography in Everyday Life P7-10 | WS 2 | |
| Term 1/4 *CNY (Mon & Tues) | Topic 1: Thinking Geographically KQ2: How do people acquire a sense of place in their neighbourhoods? 1. Sense of place a) people associate importance, meanings and memories with specific locations in their neighbourhoods b) people's experiences with natural and built environments, and interaction with others at these locations 2. Acquiring a sense of place a) individuals repeatedly encounter people and objects along familiar paths or roads during regular travel b) individuals experience significant or memorable events at local landmarks and gathering places 3. Representing a sense of place a) individuals and organisations use different forms and types of media to express people's sense of place b) individuals' sense of place could be enhanced or | Geography in Everyday Life P7-10 | WS 2 | |

| | contradicted by these different representations | | |
|----------|---|--|------|
| Term 1/5 | Topic 1: Thinking Geographically KQ3: What is the relationship between locations in a neighbourhood? Regions a) areas with similar physical and/or human characteristics or is known for something b) spheres of influence of services, events and objects on other locations in the area Spatial patterns a) non-random arrangement of services, events and objects in an area b) services, events and objects arranged in recognisable shapes, geometry, clusters and at regular intervals Spatial associations a) tendency of a pair of services, events and objects to locate near each other b) tendency suggests a connection between a service, event or object and another service, event or object | Geography in Everyday Life P11-14 | WS 3 |
| Term 1/6 | Topic 1: Thinking Geographically KQ3: What is the relationship between locations in a neighbourhood? Regions a) areas with similar physical and/or human characteristics or is known for something b) spheres of influence of services, events and objects on other locations in the area Spatial patterns a) non-random arrangement of services, events and objects in an area b) services, events and objects arranged in recognisable shapes, geometry, clusters and at regular intervals Spatial associations a) tendency of a pair of services, events and objects to locate near each other b) tendency suggests a connection between a service, event or object and another service, event or object | Geography in Everyday Life P11-14 | WS 3 |
| Term 1/7 | Topic 1: Thinking Geographically KQ4: How are neighbourhoods organised in Singapore? | Geography in Everyday Life | |
| | Spatial scales in Singapore | P15-19 | WS 4 |

| | a) more than 20 towns spread across the country, catering to different lifestyles b) each town has a town centre, serving as commercial and activity hubs for residents living in its neighbourhoods | | | |
|----------|--|----------------------------------|------|--|
| | Spatial hierarchies in Singapore a) nested areas of different sizes beginning with a single residential unit b) clusters of residential units form a precinct, which in turn form neighbourhoods that combine into a town | | | |
| | Town planning in Singapore a) serve residents and provide for nature at distinct levels of the precinct, neighbourhood and town b) create connections and synergies across precincts, neighbourhoods and towns | | | |
| Term 1/8 | Topic 1: Thinking Geographically KQ4: How are neighbourhoods organised in Singapore? | Geography in Everyday Life | WA1 | |
| | Spatial scales in Singapore a) more than 20 towns spread across the country, catering to different lifestyles b) each town has a town centre, serving as commercial and activity hubs for residents living in its neighbourhoods | P15-19 | WS 4 | |
| | Spatial hierarchies in Singapore a) nested areas of different sizes beginning with a single residential unit b) clusters of residential units form a precinct, which in turn form neighbourhoods that combine into a town | | | |
| | Town planning in Singapore a) serve residents and provide for nature at distinct levels of the precinct, neighbourhood and town b) create connections and synergies across precincts, neighbourhoods and towns | | | |
| Term 1/9 | Topic 2: Sustainable Development KQ1: What are sustainable urban neighbourhoods? | Geography in Everyday Life | | |
| | Sustainable development a) meet the needs of the present population by achieving high standards of living for all b) ensure the ability of future generations to meet their own needs | P20-24 | WS 5 | |
| | Economic and social sustainability in urban neighbourhoods a) high enough population density to support local businesses, and keep transport and infrastructure | | | |

| | costs low | | | |
|-----------|---|----------------------------------|------|--|
| | b) small population size to enable regular interaction among residents and to discuss decisions affecting the neighbourhood | | | |
| | Environmental sustainability in urban neighbourhoods a) ample protection for nature and facilities that supports waste minimisation and recycling | | | |
| | b) adopts energy and water efficient design approaches for buildings and landscapes a) | | | |
| Term 1/10 | Topic 2: Sustainable Development | Geography | | |
| | KQ1: What are sustainable urban neighbourhoods? | in Everyday Life | | |
| | Sustainable development a) meet the needs of the present population by achieving high standards of living for all b) ensure the ability of future generations to meet their own needs | P20-24 | WS 5 | |
| | Economic and social sustainability in urban neighbourhoods a) high enough population density to support local businesses, and keep transport and infrastructure costs low b) small population size to enable regular interaction among residents and to discuss decisions affecting the neighbourhood | | | |
| | 3. Environmental sustainability in urban neighbourhoods a) ample protection for nature and facilities that supports waste minimisation and recycling b) adopts energy and water efficient design approaches for buildings and landscapes | | | |
| | MARCH HOLIDAY | | | |
| Term 2/1 | Topic 2: Sustainable Development KQ2: What ecosystem services are found in urban neighbourhoods? | Geography in Everyday Life | | |
| | Urban neighbourhoods as ecosystems a) ecosystems consist of living communities and the non-living environment interacting with one another b) aquatic and terrestrial ecosystems in neighbourhoods including ponds, lakes, parks and forests | P25-28 | WS 6 | |
| | Provisioning and regulating services a) provisioning services available in neighbourhoods include fresh water and food b) regulating services in neighbourhoods include microclimate regulation, flood mitigation, air and water quality. | | | |
| | Cultural and supporting services | | | |

| | b) cultural services in neighbourhoods include aesthetics, education and recreation supporting services in neighbourhoods include soil formation, pollination and photosynthesis | | | |
|-----------------------------|--|--|--------------|--|
| Term 2/2 | Bitesize GI Topic 3: Geographical Methods KQ1: How to design fieldwork? Research questions and hypotheses identify a topic or thesis from textbooks, news articles, websites craft a question that outlines a specific scope and a measurable hypothesis about two variables Data collection sequence through primary and/or secondary sources collect quantitative data, then design qualitative data collection to examine patterns and trends collect qualitative data, then design quantitative data collection to verify observations Limitations and risks adjust research aim, study area, sample size and timeframe according to available resources implement measures to avoid harming oneself, other people and nature | Geography in Everyday Life P39-43 | GI e-booklet | |
| Term 2/3 *Good Friday (Fri) | Bitesize GI Topic 3: Geographical Methods KQ2: How to collect primary data? 1. Sampling a) use non-probability sampling methods including convenience and quota sampling b) use probability sampling methods including simple random sampling and stratified random sampling 2. Closed-ended questionnaire surveys a) create pre-defined responses to questions that are limited to short phrases, single words or numbers b) use rating scales to guide responses including the Likert Scale, frequency scale and ranking scale 3. Mental maps a) visualise experiences by drawing features and adding labels onto the base map of a study area b) conduct semi-structured interviews with openended questions exploring features and labels added to the map | Geography in Everyday Life P44-54 | GI e-booklet | |
| Term 2/4 | Bitesize GI Topic 3: Geographical Methods | Geography in Everyday Life | GI e-booklet | |

| | KQ3: How to process and analyse data? | P55-64 | | |
|---------------------------------------|--|----------------------------------|--------------|--|
| | Closed-ended questionnaire surveys interpret responses using measures of frequency including counts and percentages interpret responses using measures of central tendency including mean, mode and median Mental maps analyse how well maps represent reality and how features and labels are drawn or added examine how memories of experiences are represented on maps and described during semistructured interviews Patterns and relationships visualise positive and negative correlations using scatter plots and best-fit lines identify recognisable geometric shapes, clusters and repetitions | | | |
| Term 2/5 | Bitesize GI Topic 3: Geographical Methods | Geography in Everyday | GI e-booklet | |
| | KQ4: How to present findings? | Life | | |
| | | P65-71 | | |
| | 1. Maps a) represent spatial information using dots, lines and polygons b) provide title, date, orientation, scale, legend, author and source(s) on maps | | | |
| | Graphs a) use bar graphs and pie charts to show distributions b) use line graphs to show trends and relationships between two variables | | | |
| | Photographs and texts a) use satellite and aerial images to display spatial information b) use colour-coded quotations and word clouds to represent qualitative analyses | | | |
| Term 2/6 *Hari Raya Puasa (Mon) | Topic 2: Sustainable Development KQ2: What ecosystem services are found in urban | Geography in Everyday Life | WA2 | |
| | neighbourhoods? 1. Urban neighbourhoods as ecosystems a) ecosystems consist of living communities and the non-living environment interacting with one another b) aquatic and terrestrial ecosystems in neighbourhoods including ponds, lakes, parks and forests | P25-28 | WS 6 | |

| | Provisioning and regulating services a) provisioning services available in neighbourhoods include fresh water and food b) regulating services in neighbourhoods include microclimate regulation, flood mitigation, air and water quality. Cultural and supporting services a) cultural services in neighbourhoods include aesthetics, education and recreation b) supporting services in neighbourhoods include | | | |
|----------------------------|---|--|------|--|
| | soil formation, pollination and photosynthesis | | | |
| Term 2/7 *Labour Day (Mon) | Topic 2: Sustainable Development KQ3: What are common hazards in urban neighbourhoods? 1. Fire hazards a) fires in neighbourhoods are commonly caused by faulty electrical appliances and wiring, and unattended cooking fires b) negative consequences of fires include burn injuries, smoke inhalation and property damage | Geography in Everyday Life P29-32 | WS 7 | |
| | 2. Air pollution hazards a) air pollution in neighbourhoods is commonly caused by burning vegetation and industrial and motor vehicle emissions b) negative consequences of air pollution include respiratory infections, heart disease and lung cancer 3. Traffic hazards a) traffic accidents in neighbourhoods are commonly caused by speeding, red-light running and drunk driving b) negative consequences of traffic accidents include serious injury and loss of life | | | |
| Term 2/8 | Topic 2: Sustainable Development KQ3: What are common hazards in urban neighbourhoods? 1. Fire hazards a) fires in neighbourhoods are commonly caused by faulty electrical appliances and wiring, and unattended cooking fires b) negative consequences of fires include burn injuries, smoke inhalation and property damage | Geography in Everyday Life P29-32 | WS 7 | |
| | Air pollution hazards a) air pollution in neighbourhoods is commonly caused by burning vegetation and industrial and motor vehicle emissions | | | |

| | b) negative consequences of air pollution include respiratory infections, heart disease and lung cancer | | | |
|-----------|---|----------------------------------|------|--|
| | Traffic hazards a) traffic accidents in neighbourhoods are commonly caused by speeding, red-light running and drunk driving b) negative consequences of traffic accidents include serious injury and loss of life | | | |
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| Term 2/9 | Topic 2: Sustainable Development KQ4: How to build sustainable urban neighbourhoods? | Geography in Everyday Life | | |
| | Environmental stewardship a) promote volunteerism among neighbourhood residents to share knowledge with others about the importance of healthy ecosystems b) partner public and private stakeholders in environmental stewardship efforts | P33-38 | WS 8 | |
| | Disaster risk management a) reduce neighbourhoods' exposure to hazards and the vulnerability of people and properties to hazards b) improve residents' preparedness in responding to hazards and implement monitoring and warning systems | | | |
| | 3. Community resilience a) strengthen relationships among residents and raise their awareness of potential hazards b) develop residents' ability to organise themselves and equip themselves with resources to resist, adapt and recover from a disaster. | | | |
| Term 2/10 | Topic 2: Sustainable Development | Geography in Everyday | | |
| | KQ4: How to build sustainable urban neighbourhoods? | Life | | |
| | Environmental stewardship a) promote volunteerism among neighbourhood residents to share knowledge with others about the importance of healthy ecosystems b) partner public and private stakeholders in environmental stewardship efforts | P33-38 | WS 8 | |
| | Disaster risk management a) reduce neighbourhoods' exposure to hazards and the vulnerability of people and properties to hazards b) improve residents' preparedness in responding to hazards and implement monitoring and warning systems | | | |
| | 3. Community resilience | | | |
| | | | | |

| (Fri) Term 3/1 *Hari Raya Haji (Thurs) 1 Term 3/2 *Youth Day (Mon) k | Topic 1: Plate Tectonics KQ1: What is the plate tectonic theory? 1. Plate tectonic theory a) Earth's internal structure consists of core, mantle and crust, including continental and oceanic crusts b) explains how forces within Earth drives global plate movements 2. Convection currents a) within the hot softened mantle below the crust b) being the driving force of overlying plates 3. Slab-pull force a) gravity-controlled subduction of denser oceanic plate drags the root of the plate along. | Tectonics P1-4 | WS 9 | |
|---|--|--------------------------|------|--|
| *Hari Raya Haji (Thurs) 1 Term 3/2 *Youth Day (Mon) | KQ1: What is the plate tectonic theory? 1. Plate tectonic theory a) Earth's internal structure consists of core, mantle and crust, including continental and oceanic crusts b) explains how forces within Earth drives global plate movements 2. Convection currents a) within the hot softened mantle below the crust b) being the driving force of overlying plates 3. Slab-pull force a) gravity-controlled subduction of denser oceanic | | WS 9 | |
| *Youth Day (Mon) | plate drags the rest of the plate along b) drags the rest of the plate along | | | |
| 3 | Topic 1: Plate Tectonics KQ1: What is the plate tectonic theory? Plate tectonic theory a) Earth's internal structure consists of core, mantle and crust, including continental and oceanic crusts b) explains how forces within Earth drives global plate movements Convection currents a) within the hot softened mantle below the crust b) being the driving force of overlying plates Slab-pull force a) gravity-controlled subduction of denser oceanic plate drags the rest of the plate along b) drags the rest of the plate along | Tectonics P1-4 | WS 9 | |
| Term 3/3 1 | Topic 1: Plate Tectonics | Tectonics P5-7 | WS10 | |

| | b) forms new oceanic crusts | | |
|--|---|-----------|------|
| | Evidence from age of rocks a) younger rocks are found nearer to the crest of mid-ocean ridges b) rocks get progressively older further away from mid-ocean ridges | | |
| | Evidence from limited sediment accumulation a) destruction of older oceanic crusts at trenches b) oceanic crusts younger than continental crusts | | |
| Term 3/4 | Topic 1: Plate Tectonics | Tectonics | |
| | KQ 2: How does seafloor spreading support the plate tectonic theory? | P5-7 | WS10 |
| | Seafloor spreading a) magma rises through mid-ocean ridges b) forms new oceanic crusts | | |
| | Evidence from age of rocks a) younger rocks are found nearer to the crest of mid-ocean ridges b) rocks get progressively older further away from mid-ocean ridges | | |
| | Evidence from limited sediment accumulation a) destruction of older oceanic crusts at trenches b) oceanic crusts younger than continental crusts | | |
| Term 3/5 *HBL 25-27 | Topic 1: Plate Tectonics | Tectonics | |
| Jul (Tues- Thurs) due to National Oral | KQ3: How does magnetic striping support the plate tectonic theory? | P8-11 | WS11 |
| *3E OBS (24-38 Jul) | Magnetic striping a) normal and reversed polarity b) stripes of rock on the seafloor with alternating magnetic properties | | |
| | Evidence from rock composition a) basalt is a volcanic rock that forms the oceanic crust b) contains minerals that can be influenced by Earth's magnetic field | | |
| | Evidence from rock patterns a) alternating polarity forms a striped pattern b) not random or isolated occurrences | | |
| Term 3/6 *3N OBS (31- | Topic 1: Plate Tectonics | Tectonics | WS11 |
| 4 Aug) | KQ3: How does magnetic striping support the plate tectonic theory? | P8-11 | |

| | Magnetic striping a) normal and reversed polarity b) stripes of rock on the seafloor with alternating magnetic properties Evidence from rock composition a) basalt is a volcanic rock that forms the oceanic crust b) contains minerals that can be influenced by Earth's magnetic field Evidence from rock patterns a) alternating polarity forms a striped pattern b) not random or isolated occurrences | | | |
|-------------------------------|--|-----------|------|--|
| Term 3/7 | Topic 1: Plate Tectonics | Tectonics | WS12 | |
| *National Day (Tues-Thurs) | KQ4: What will happen to different tectonic plates when they move at the different plate boundaries? | P12-22 | | |
| | Divergent plate boundaries a) plates move away from each other b) results in mid-oceanic ridges, volcanoes including submarine volcanoes and volcanic islands, rift systems and earthquakes | | | |
| | Convergent plate boundaries a) plates move towards each other b) results in fold mountains, volcanoes including submarine volcanoes, oceanic trenches and earthquakes | | | |
| | Transform plate boundaries a) plates slide past each other b) results in faults and earthquakes | | | |
| Term 3/8 | Topic 1: Plate Tectonics | Tectonics | WA3 | |
| | KQ4: What will happen to different tectonic plates when they move at the different plate boundaries? | P12-22 | WS12 | |
| | Divergent plate boundaries a) plates move away from each other b) results in mid-oceanic ridges, volcanoes including submarine volcanoes and volcanic islands, rift systems and earthquakes | | | |
| | Convergent plate boundaries a) plates move towards each other b) results in fold mountains, volcanoes including submarine volcanoes, oceanic trenches and earthquakes | | | |
| | Transform plate boundaries a) plates slide past each other b) results in faults and earthquakes | | | |

| Term 3/9 | Topic 2: Earthquakes and volcanoes | Tectonics | WS13 |
|----------------------|---|-----------|------|
| | KQ1: How do tectonic processes affect the magnitude of earthquakes? | P23-26 | |
| | Tectonic processes of earthquakes a) stress builds up and exceeds strength of the fault b) sudden release of seismic waves, radiating energy from the focus | | |
| | Magnitude of earthquakes a) affected by amount of energy released through ground movement b) recorded using seismometers | | |
| | Measuring earthquakes a) Richter Scale measures local magnitude of earthquakes b) Moment Magnitude Scale measures larger earthquakes more reliably | | |
| Term 3/10 *Teacher's | Topic 2: Earthquakes and volcanoes | Tectonics | WS13 |
| day (Thurs-Fri) | KQ1: How do tectonic processes affect the magnitude of earthquakes? | P23-26 | |
| | Tectonic processes of earthquakes a) stress builds up and exceeds strength of the fault b) sudden release of seismic waves, radiating energy from the focus | | |
| | Magnitude of earthquakes a) affected by amount of energy released through ground movement b) recorded using seismometers | | |
| | Measuring earthquakes a) Richter Scale measures local magnitude of earthquakes b) Moment Magnitude Scale measures larger earthquakes more reliably | | |
| | SEPTEMBER HOLIDAY | | |
| Term 4/1 | Revision for EOY | | |
| Term 4/2 | Revision for EOY | | |
| Term 4/3 | End-of-year Exams | | |
| Term 4/4 | End-of-year Exams | | |
| Term 4/5 | Go through EOY paper | Tootonico | WC14 |
| Term 4/6 | Topic 2: Earthquakes and volcanoes | Tectonics | WS14 |

| | KQ2: How do tectonic processes affect the magnitude of volcanic eruptions? | P27-33 | | |
|----------------------------|--|-----------|------|--|
| | Tectonic processes of volcanic eruptions a) magma consisting of dissolved gases is less dense b) forces its way upward and breaks through weak areas in the Earth's crust | | | |
| | Magnitude of volcanic eruptions a) determined by amount of dissolved gases and magma viscosity b) stratovolcanoes erupt violently and shield volcanoes emit magma gently | | | |
| | Measuring volcanic eruptions a) Volcanic Explosivity Index measures relative explosivity of historic eruptions b) considers the volume of ejected materials, height of eruption cloud and duration of the eruption | | | |
| Term 4/7 | Topic 2: Earthquakes and volcanoes | Tectonics | WS14 | |
| (Last week of sch sec 1-2) | KQ2: How do tectonic processes affect the magnitude of volcanic eruptions? | P27-33 | | |
| | Tectonic processes of volcanic eruptions a) magma consisting of dissolved gases is less dense b) forces its way upward and breaks through weak areas in the Earth's crust | | | |
| | Magnitude of volcanic eruptions a) determined by amount of dissolved gases and magma viscosity b) stratovolcanoes erupt violently and shield volcanoes emit magma gently | | | |
| | Measuring volcanic eruptions a) Volcanic Explosivity Index measures relative explosivity of historic eruptions b) considers the volume of ejected materials, height of eruption cloud and duration of the eruption | | | |
| | DECEMBER HOLIDAY | | - | |
| | | | | |

^{*}Please note that the topics might be subject to minor changes. Pupils will be updated accordingly.

2 <u>Assessment Plan</u>

| Semester 1 | WA1: Class Test 1 | 15% | Competer 2 | WA3: Class Test 3 | 15% |
|------------|-------------------|-----|------------|-------------------|-----|
| | WA2: Class Test 2 | 15% | Semester 2 | End-of-year Exam | 55% |

3 Details of End-of-Year Examinations

| End-of-year Components | | | Date | Guidelines | |
|------------------------|---|-------|-------------------|--|--|
| Paper [1h 45mins] | | | | All topics covered in | |
| Section | Details | Marks | | semester 1 and 2. | |
| Α | Questions 1: Cluster – Geography in Everyday Life | 25m | Term 4, Week 3 | • For the paper, candidates are to write | |
| В | Question 3: Cluster 4 – Tectonics | 25m | | their answers on the question booklet.Total marks for the paper is 50m. | |

4 Absence from Assessments

- a) A medical certificate must be produced if a student is absent for Weighted Assessment.
- b) Absence from any Weighted Assessment without a valid reason will result in zero mark.
- c) Student who is absent from a Weighted Assessment will have to do a make-up session on the day he/she returns to school.